FILE 'USPAT' ENTERED AT 13:01:56 ON 04 AUG 1997

```
 ********************************
 *      WELCOME TO THE          *
 *   U.S. PATENT TEXT FILE      *
 ********************************
```

```
=> s cd4
L1      1514 CD4

=> s immunoglobulin# or igg#
       7235 IMMUNOGLOBULIN#
       8268 IGG#
L2      10893 IMMUNOGLOBULIN# OR IGG#

=> s (fusion protein#) or (fusion polypeptide#) or chimer? or hybrid
      36807 FUSION
      65549 PROTEIN#
       2522 FUSION PROTEIN#
            (FUSION(W)PROTEIN#)
      36807 FUSION
      14249 POLYPEPTIDE#
        336 FUSION POLYPEPTIDE#
            (FUSION(W)POLYPEPTIDE#)
       2323 CHIMER?
      32057 HYBRID
L3      34372 (FUSION PROTEIN#) OR (FUSION POLYPEPTIDE#) OR
CHIMER? OR HY
BRI
            D

=> s l1 (p) l2 (p) l3
L4      49 L1 (P) L2 (P) L3

=> d bib 1-
```

US PAT NO: 5,652,333 :IMAGE AVAILABLE: L4: 1 of 49
DATE ISSUED: Jul. 29, 1997
TITLE: gC1q receptor, HIV-1 gp120 region binding thereto, and related peptides and targeting antibodies
INVENTOR: Michael S. C. Fung, Houston, TX
Bill N. C. Sun, Bellaire, TX
Cecily R. Y. Sun, Bellaire, TX
Young Woo Kim, Plainsboro, NJ
Liming Yu, Houston, TX
ASSIGNEE: Tanox Biosystems, Inc., Houston, TX (U.S. corp.)
APPL-NO: 08/709,047
DATE FILED: Sep. 6, 1996
ART-UNIT: 183
PRIM-EXMR: Robert D. Budens
LEGAL-REP: Eric P. Mirabel

US PAT NO: 5,652,110 :IMAGE AVAILABLE: L4: 2 of 49
DATE ISSUED: Jul. 29, 1997
TITLE: Antibodies to .alpha.v.beta.3 integrin
INVENTOR: Kyung Jin Kim, San Francisco, CA
Michael A. Horton, Nr Saffron Walden, Great Britain
Sarah C. Bodary, San Francisco, CA
Anan Chuntharapai, Colma, CA
ASSIGNEE: Genentech, Inc., So. San Francisco, CA (U.S. corp.)
APPL-NO: 08/432,618
DATE FILED: May 2, 1995
ART-UNIT: 186
PRIM-EXMR: Lila Feisee
ASST-EXMR: Ray F. Ebert
LEGAL-REP: Walter H. Dreger

US PAT NO: 5,652,109 :IMAGE AVAILABLE: L4: 3 of 49
DATE ISSUED: Jul. 29, 1997
TITLE: Antibodies to .alpha.v.beta.3 integrin
INVENTOR: Kyung Jin Kim, San Francisco, CA
Michael A. Horton, Quendon, Great Britain
Sarah C. Bodary, San Francisco, CA
Anan Chuntharapai, Colma, CA
ASSIGNEE: Genentech, Inc., So. San Francisco, CA (U.S. corp.)
APPL-NO: 08/432,542
DATE FILED: May 2, 1995
ART-UNIT: 186
PRIM-EXMR: Lila Feisee
ASST-EXMR: Ray F. Ebert
LEGAL-REP: Walter H. Dreger

US PAT NO: 5,643,570 :IMAGE AVAILABLE: L4: 4 of 49
DATE ISSUED: Jul. 1, 1997
TITLE: BPI-immunoglobulin fusion proteins
INVENTOR: Georgia Theofan, Torrance, CA
Lynn S. Grinna, Middleburg, VA
Arnold Horwitz, Los Angeles, CA
ASSIGNEE: XOMA Corporation, Berkeley, CA (U.S. corp.)
APPL-NO: 08/064,693
DATE FILED: May 19, 1993
ART-UNIT: 186
PRIM-EXMR: Frank C. Eisenschenk
LEGAL-REP: Marshall, O'Toole, Gerstein, Murray & Borun

US PAT NO: 5,635,602 :IMAGE AVAILABLE: L4: 5 of 49
DATE ISSUED: Jun. 3, 1997
TITLE: Design and synthesis of bispecific DNA-antibody conjugates
INVENTOR: Charles R. Cantor, Boston, MA
Roy S. Chuck, New York, NY
Doris B. Tse, Riverdale, NY
ASSIGNEE: The Regents of the University of California, Oakland, CA (U.S. corp.)
APPL-NO: 08/107,186
DATE FILED: Aug. 13, 1993
ART-UNIT: 186
PRIM-EXMR: Lila Feisee
LEGAL-REP: Karen S.Flehr, Hohbach, Test, Albritton & Herbert Smith

US PAT NO: 5,627,073 :IMAGE AVAILABLE: L4: 6 of 49
DATE ISSUED: May 6, 1997
TITLE: Hybridomas producing antibodies to cardiac hypertrophy factor
INVENTOR: Joffre Baker, El Granada, CA
Kenneth Chien, La Jolla, CA
Kathleen King, Pacifica, CA
Diane Pennica, Burlingame, CA
William Wood, San Mateo, CA
ASSIGNEE: Genentech, Inc. (U.S. corp.)
The Regents of the University of California (U.S. corp.)
APPL-NO: 08/443,129
DATE FILED: May 17, 1995
ART-UNIT: 183
PRIM-EXMR: Christine M. Nucker
ASST-EXMR: Julie E. Reeves
LEGAL-REP: Timothy E. Torchia, Janet E. Hasak

US PAT NO: 5,627,025 :IMAGE AVAILABLE: L4: 7 of 49
DATE ISSUED: May 6, 1997
TITLE: Method for the identification of compounds capable of abrogating human immunodeficiency virus (HIV) infection of dendritic cells and T-lymphocytes
INVENTOR: Ralph M. Steinman, Westport, CT
Melissa Pope, New York, NY
Michiel Betjes, Amsterdam, Netherlands
Lloyd Hoffman, Great Neck, NY
ASSIGNEE: The Rockefeller University, New York, NY (U.S. corp.)
APPL-NO: 08/290,432
DATE FILED: Aug. 12, 1994
ART-UNIT: 183
PRIM-EXMR: Christine M. Nucker
ASST-EXMR: Jeffrey S. Parkin, Ph.D.
LEGAL-REP: Klauber & Jackson

US PAT NO: 5,624,899 :IMAGE AVAILABLE: L4: 8 of 49
DATE ISSUED: Apr. 29, 1997
TITLE: Method for using Htk ligand
INVENTOR: Brian D. Bennett, Pacifica, CA
William Matthews, Woodside, CA
ASSIGNEE: Genentech Inc., So. San Francisco, CA (U.S. corp.)
APPL-NO: 08/436,044
DATE FILED: May 5, 1995
ART-UNIT: 188
PRIM-EXMR: Donald E. Adams
ASST-EXMR: Stephen Gucker
LEGAL-REP: Walter H. Dreger

US PAT NO: 5,624,806 :IMAGE AVAILABLE: L4: 9 of 49
DATE ISSUED: Apr. 29, 1997
TITLE: Antibodies to cardiac hypertrophy factor and uses thereof
INVENTOR: Joffre Baker, El Granada, CA
Kenneth Chien, La Jolla, CA
Kathleen King, Pacifica, CA
Diane Pennica, Burlingame, CA
William Wood, San Mateo, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
The Regents of the University of California, Oakland, CA (U.S. corp.)
APPL-NO: 08/442,745
DATE FILED: May 17, 1995
ART-UNIT: 186
PRIM-EXMR: Marian C. Knode
ASST-EXMR: Nancy A. Johnson
LEGAL-REP: Janet E. Hasak, Timothy E. Torchia

US PAT NO: 5,620,889 :IMAGE AVAILABLE: L4: 10 of 49

DATE ISSUED: Apr. 15, 1997
TITLE: Human anti-Fas IgG1 monoclonal antibodies
INVENTOR: David H. Lynch, Bainbridge Island, WA
Mark R. Alderson, Bainbridge Island, WA
ASSIGNEE: Immunex Corporation, Seattle, WA (U.S. corp.)
APPL-NO: 08/322,805
DATE FILED: Oct. 13, 1994
ART-UNIT: 186
PRIM-EXMR: Susan A. Loring

US PAT NO: 5,605,689 :IMAGE AVAILABLE: L4: 11 of 49
DATE ISSUED: Feb. 25, 1997
TITLE: Treatment of HIV-associated immune thrombocytopenic purpura
INVENTOR: Arthur J. Ammann, San Rafael, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
APPL-NO: 08/237,962
DATE FILED: May 3, 1994
ART-UNIT: 183
PRIM-EXMR: Robert D. Budens
LEGAL-REP: Jeffrey S. Kubinec

US PAT NO: 5,604,115 :IMAGE AVAILABLE: L4: 12 of 49
DATE ISSUED: Feb. 18, 1997
TITLE: Liver enriched transcription factor
INVENTOR: Frances M. Sladek, Riverside, CA
Weimin Zhong, New York, NY
James E. Darnell, Jr., Larchmont, NY
ASSIGNEE: The Rockefeller University, New York, NY (U.S. corp.)
APPL-NO: 08/078,222
DATE FILED: Oct. 28, 1993
ART-UNIT: 184
PRIM-EXMR: Robert A. Wax
ASST-EXMR: Kawai Lau
LEGAL-REP: Klauber & Jackson

US PAT NO: 5,587,455 :IMAGE AVAILABLE: L4: 13 of 49
DATE ISSUED: Dec. 24, 1996
TITLE: Cytotoxic agent against specific virus infection
INVENTOR: Edward A. Berger, Rockville, MD
Bernard Moss, Bethesda, MD
Thomas R. Fuerst, Gaithersburg, MD
Ira Pastan, Potomac, MD
David Fitzgerald, Rockville, MD
Tamio Mizukami, Machida, Japan
Vijay K. Chaudhary, New Delhi, India
ASSIGNEE: The United States of America as represented by the Department of Health and Human Services, Washington, DC (U.S. govt.)
APPL-NO: 08/335,669
DATE FILED: Nov. 8, 1994
ART-UNIT: 185
PRIM-EXMR: David Guzo
LEGAL-REP: Morgan & Finnegan

US PAT NO: 5,580,756 :IMAGE AVAILABLE: L4: 14 of 49
DATE ISSUED: Dec. 3, 1996
TITLE: B7IG fusion protein
INVENTOR: Peter S. Linsley, Seattle, WA
Jeffrey A. Ledbetter, Seattle, WA
Nitin K. Damle, Renton, WA
William Brady, Bothell, WA
ASSIGNEE: Bristol-Myers Squibb Co., Seattle, WA (U.S. corp.)
APPL-NO: 08/219,518
DATE FILED: Mar. 29, 1994
ART-UNIT: 186
PRIM-EXMR: Donald E. Adams
LEGAL-REP: Merchant, Gould, Smith, Edell, Welter & Schmidt

US PAT NO: 5,578,704 :IMAGE AVAILABLE: L4: 15 of 49
DATE ISSUED: Nov. 26, 1996
TITLE: Antibody to osteoclast alphavbeta3 ntegrin
INVENTOR: Kyung J. Kim, San Francisco, CA
Michael A. Horton, Essex, Great Britain
Sarah C. Bodary, San Francisco, CA
Anan Chuntharapai, Colma, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
APPL-NO: 08/307,844
DATE FILED: Sep. 30, 1994
ART-UNIT: 186
PRIM-EXMR: Margaret Parr
ASST-EXMR: Jacqueline G. Krikorian
LEGAL-REP: Janet E. Hasak, Wendy M. Lee

US PAT NO: 5,574,205 :IMAGE AVAILABLE: L4: 16 of 49
DATE ISSUED: Nov. 12, 1996
TITLE: Homologous recombination for universal donor cells and chimeric mammalian hosts
INVENTOR: Raju Kucherlapati, Darien, CT
Beverly H. Koller, Carrboro, NC
Oliver Smithies, Chapel Hill, NC
Robert B. Dubridge, Belmont, CA
Gary Greenburg, San Carlos, CA
Daniel J. Capon, Hillsborough, CA
Steven R. Williams, San Francisco, CA
Mariona L. A. De Rafael, Barcelona, Spain
ASSIGNEE: Cell Genesys, Foster City, CA (U.S. corp.)
APPL-NO: 08/175,469
DATE FILED: Dec. 30, 1993
ART-UNIT: 184
PRIM-EXMR: Jasemine C. Chambers
LEGAL-REP: Cell Genesys

US PAT NO: 5,573,762 :IMAGE AVAILABLE: L4: 17 of 49
DATE ISSUED: Nov. 12, 1996
TITLE: Use of leukemia inhibitory factor specific antibodies and endothelin antagonists for treatment of cardiac hypertrophy
INVENTOR: Napoleone Ferrara, San Francisco, CA
Kathleen King, Pacifica, CA
Elizabeth Luis, San Francisco, CA
Jennie P. Mather, Millbrae, CA
Nicholas F. Paoni, Belmont, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
APPL-NO: 08/428,002
DATE FILED: Apr. 24, 1995
ART-UNIT: 186
PRIM-EXMR: Paula K. Hutzell
ASST-EXMR: Nancy A. Johnson
LEGAL-REP: Timothy E. Torchia, Ph.D, Janet E. Hasak

US PAT NO: 5,571,893 :IMAGE AVAILABLE: L4: 18 of 49
DATE ISSUED: Nov. 5, 1996
TITLE: Cardiac hypertrophy factor
INVENTOR: Joffre Baker, El Granada, CA
Kenneth Chien, La Jolla, CA
Kathleen King, Pacifica, CA
Diane Pennica, Burlingame, CA
William Wood, San Mateo, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
Regents of the Univ. of California, Oakland, CA (U.S. corp.)
APPL-NO: 08/286,304
DATE FILED: Aug. 5, 1994
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper
ASST-EXMR: Robert C. Hayes
LEGAL-REP: Timothy E. Torchia, Janet E. Hasak

US PAT NO: 5,571,675 :IMAGE AVAILABLE: L4: 19 of 49
DATE ISSUED: Nov. 5, 1996
TITLE: Detection and amplification of candiotrophin-1(cardiac hypertrophy factor)
INVENTOR: Joffre Baker, El Granada, CA
Kenneth Chien, La Jolla, CA
Kathleen King, Pacifica, CA
Diane Pennica, Burlingame, CA
William Wood, San Mateo, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
Regents of the Univ. of California, Oakland, CA (U.S. corp.)
APPL-NO: 08/444,083
DATE FILED: May 17, 1995
ART-UNIT: 187
PRIM-EXMR: Stephanie W. Zitomer
ASST-EXMR: Jeffrey Fredman
LEGAL-REP: Timothy E. Torchia, Janet E. Hasak

US PAT NO: 5,565,335 :IMAGE AVAILABLE: L4: 20 of 49
DATE ISSUED: Oct. 15, 1996
TITLE: Adhesion variants
INVENTOR: Daniel J. Capon, San Mateo, CA
Timothy J. Gregory, Hillsborough, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
APPL-NO: 08/236,311
DATE FILED: May 2, 1994
ART-UNIT: 182
PRIM-EXMR: John Ulm
LEGAL-REP: Jeffrey S. Kubinec

US PAT NO: 5,547,853 :IMAGE AVAILABLE: L4: 21 of 49
DATE ISSUED: Aug. 20, 1996
TITLE: CD2-binding domain of lymphocyte function associated antigen 3
INVENTOR: Barbara P. Wallner, Cambridge, MA

Glenn T. Miller, Haverhill, MA
Margaret D. Rosa, Winchester, MA
ASSIGNEE: Biogen, Inc., Cambridge, MA (U.S. corp.)
APPL-NO: 07/940,861
DATE FILED: Oct. 21, 1992
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper
ASST-EXMR: John D. Ulm
LEGAL-REP: Denise L. Loring, Immac J. Thampoe

US PAT NO: 5,534,615 :IMAGE AVAILABLE: L4: 22 of 49
DATE ISSUED: Jul. 9, 1996
TITLE: Cardiac hypertrophy factor and uses therefor
INVENTOR: Joffre Baker, El Granada, CA
Kenneth Chien, La Jolla, CA
Kathleen King, Pacifica, CA
Diane Pennice, Burlingame, CA
William Wood, San Mateo, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
The Regents of the University of California, Oakland, CA (U.S. corp.)
APPL-NO: 08/233,609
DATE FILED: Apr. 25, 1994
ART-UNIT: 184
PRIM-EXMR: Robert A. Wax
ASST-EXMR: Hyosuk Kim
LEGAL-REP: Janet E. Hasak, Timothy E. Torchia

US PAT NO: 5,521,288 :IMAGE AVAILABLE: L4: 23 of 49
DATE ISSUED: May 28, 1996
TITLE: CD28IG fusion protein
INVENTOR: Peter S. Linsley, Seattle, WA
Jeffrey A. Ledbetter, Seattle, WA
Nitin K. Damle, Renton, WA
William Brady, Bothell, WA
ASSIGNEE: Bristol-Myers Squibb Company, Seattle, WA (U.S. corp.)
APPL-NO: 08/219,116
DATE FILED: Mar. 29, 1994
ART-UNIT: 186
PRIM-EXMR: Donald E. Adams
LEGAL-REP: Merchant, Gould, Smith, Edell, Welter & Schmidt

US PAT NO: 5,514,661 :IMAGE AVAILABLE: L4: 24 of 49
DATE ISSUED: May 7, 1996
TITLE: Immunological activity of rhamnolipids
INVENTOR: Goran Piljac, 2323 Shasta Dr., Apt 40, Davis, CA 95616
Visnja Piljac, 2323 Shasta Dr., Apt 40, Davis, CA 95616
APPL-NO: 08/520,076
DATE FILED: Aug. 28, 1995
ART-UNIT: 183
PRIM-EXMR: Ronald W. Griffin
LEGAL-REP: Oblon, Spivak, McClelland, Maier & Neustadt

US PAT NO: 5,514,582 :IMAGE AVAILABLE: L4: 25 of 49
DATE ISSUED: May 7, 1996
TITLE: Recombinant DNA encoding hybrid immunoglobulins
INVENTOR: Daniel J. Capon, San Mateo, CA
Laurence A. Lasky, Sausalito, CA
ASSIGNEE: Genentech, Inc., San Francisco, CA (U.S. corp.)
APPL-NO: 08/185,670
DATE FILED: Jan. 21, 1994
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper
ASST-EXMR: John D. Ulm
LEGAL-REP: Ginger R. Dreger

US PAT NO: 5,504,000 :IMAGE AVAILABLE: L4: 26 of 49
DATE ISSUED: Apr. 2, 1996
TITLE: Chimeric protein tyrosine kinases
INVENTOR: Dan Littman, San Francisco, CA
Hua Xu, San Francisco, CA
ASSIGNEE: Regents of the University of California, Oakland, CA (U.S. corp.)
APPL-NO: 08/459,170
DATE FILED: Jun. 2, 1995
ART-UNIT: 184
PRIM-EXMR: Robert A. Wax
ASST-EXMR: Hyosuk Kim
LEGAL-REP: Townsend and Townsend and Crew

US PAT NO: 5,470,843 :IMAGE AVAILABLE: L4: 27 of 49
DATE ISSUED: Nov. 28, 1995
TITLE: Carbohydrate-containing polymers, their preparation and use
INVENTOR: Wilhelm Stahl, Frankfurt am Main, Federal Republic of Germany
Michael Ahlers, Mainz, Federal Republic of Germany
Axel Walch, Frankfurt am Main, Federal Republic of Germany
Eckhart Bartnik, Wiesbaden, Federal Republic of Germany
Gerhard Kretzschmar, Eschborn, Federal Republic of Germany
Susanne Grabley, Koenigstein, Federal Republic of Germany
Rudolf Schleyerbach, Hofheim/Taunus, Federal Republic of Germany
ASSIGNEE: Hoechst Aktiengesellschaft, Federal Republic of Germany (foreign corp.)
APPL-NO: 08/165,805
DATE FILED: Dec. 13, 1993
ART-UNIT: 183
PRIM-EXMR: Douglas W. Robinson
ASST-EXMR: Kathleen Kahler Fonda
LEGAL-REP: Foley & Lardner

US PAT NO: 5,466,675 :IMAGE AVAILABLE: L4: 28 of 49
DATE ISSUED: Nov. 14, 1995
TITLE: Immunological activity of rhamnolipids
INVENTOR: Goran Piljac, 2323 Shasta Dr., Apt. 40, Davis, CA 95616
Visnja Piljac, 2323 Shasta Dr., Apt. 40, Davis, CA 95616
APPL-NO: 08/277,975
DATE FILED: Jul. 20, 1994
ART-UNIT: 185
PRIM-EXMR: Ronald W. Griffin
LEGAL-REP: Oblon, Spivak, McClelland, Maier & Neustadt

US PAT NO: 5,455,337 :IMAGE AVAILABLE: L4: 29 of 49
DATE ISSUED: Oct. 3, 1995
TITLE: DNA encoding chimeric polypeptides comprising the interleukin-5 receptor .alpha.-chain fused to immunoglobulin heavy chain constant regions
INVENTOR: Rene Devos, Oostende, Belgium
Walter Fiers, Destelbergen, Belgium
Jose van der Heyden, Munte, Belgium
Geert Plaetinck, Destelbergen, Belgium
Jan Tavernier, Balegem, Belgium
ASSIGNEE: Hoffmann-La Roche Inc., Nutley, NJ (U.S. corp.)
APPL-NO: 07/947,130
DATE FILED: Sep. 16, 1992
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper
ASST-EXMR: Elizabeth C. Kemmerer
LEGAL-REP: George M. Gould, George W. Johnston, John P. Parise

US PAT NO: 5,455,165 :IMAGE AVAILABLE: L4: 30 of 49
DATE ISSUED: Oct. 3, 1995
TITLE: Expression vector encoding hybrid immunoglobulins
INVENTOR: Daniel J. Capon, San Mateo, CA
Laurence A. Lasky, Sausalito, CA
ASSIGNEE: Genentech, Inc., San Francisco, CA (U.S. corp.)
APPL-NO: 08/185,669
DATE FILED: Jan. 21, 1994
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper
ASST-EXMR: John D. Ulm
LEGAL-REP: Ginger R. Dreger

US PAT NO: 5,447,851 :IMAGE AVAILABLE: L4: 31 of 49
DATE ISSUED: Sep. 5, 1995
TITLE: DNA encoding a chimeric polypeptide comprising the extracellular domain of TNF receptor fused to IgG, vectors, and host cells
INVENTOR: Bruce A. Beutler, Dallas, TX
Karsten Peppel, Dallas, TX
David F. Crawford, Irving, TX
ASSIGNEE: Board of Regents, The University of Texas System, Austin, TX (U.S. corp.)
APPL-NO: 07/862,495
DATE FILED: Apr. 2, 1992
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper
ASST-EXMR: K. Cochrane Carlson
LEGAL-REP: Arnold, White & Durkee

US PAT NO: 5,439,819 :IMAGE AVAILABLE: L4: 32 of 49
DATE ISSUED: Aug. 8, 1995
TITLE: Chimeric protein tyrosine kinases
INVENTOR: Dan Littman, San Francisco, CA
Hua Xu, San Francisco, CA
ASSIGNEE: The Regents of the University of California, Oakland, CA (U.S. corp.)
APPL-NO: 08/112,912
DATE FILED: Aug. 27, 1993
ART-UNIT: 184
PRIM-EXMR: Robert A. Wax
ASST-EXMR: Hyosuk Kim
LEGAL-REP: Townsend and Townsend Khourie and Crew

US PAT NO: 5,434,131 :IMAGE AVAILABLE: L4: 33 of 49
DATE ISSUED: Jul. 18, 1995
TITLE: Chimeric CTLA4 receptor and methods for its use
INVENTOR: Peter S. Linsley, Seattle, WA
Jeffrey A. Ledbetter, Seattle, WA
Nitin K. Damle, Renton, WA
William Brady, Bothell, WA
ASSIGNEE: Bristol Myers Squibb Co., Seattle, WA (U.S. corp.)
APPL-NO: 08/067,684
DATE FILED: May 26, 1993
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper
ASST-EXMR: Lorraine M. Spector
LEGAL-REP: Merchant, Gould, Smith, Edell, Welter & Schmidt

US PAT NO: 5,429,746 :IMAGE AVAILABLE: L4: 34 of 49
DATE ISSUED: Jul. 4, 1995
TITLE: Antibody purification
INVENTOR: Paula J. Shadle, Gulph Mills, PA
John C. Erickson, Conshohocken, PA
Robert G. Scott, Collingswood, NJ
Thomas M. Smith, Drexel Hill, PA
ASSIGNEE: Smith Kline Beecham Corporation, Philadelphia, PA (U.S. corp.)
APPL-NO: 08/200,126
DATE FILED: Feb. 22, 1994
ART-UNIT: 136
PRIM-EXMR: Ernest G. Therkorn
LEGAL-REP: Herbert H. Jervis, Edward T. Lentz

US PAT NO: 5,428,143 :IMAGE AVAILABLE: L4: 35 of 49
DATE ISSUED: Jun. 27, 1995
TITLE: Cytotoxic agent against specific virus infection
INVENTOR: Edward A. Berger, Rockville, MD
Bernard Moss, Bethesda, MD
Thomas R. Fuerst, Gaithersburg, MD
Ira Pastan, Potomac, MD
David Fitzgerald, Silverspring, MD
Tamio Mizukami, Bethesda, MD
Vijay K. Chaudhary, Rockville, MD
ASSIGNEE: United States of America, Washington, DC (U.S. govt.)
APPL-NO: 08/022,095
DATE FILED: Feb. 25, 1993
ART-UNIT: 185
PRIM-EXMR: Richard A. Schwartz
ASST-EXMR: David Guzo
LEGAL-REP: Morgan & Finnegan

US PAT NO: 5,428,130 :IMAGE AVAILABLE: L4: 36 of 49
DATE ISSUED: Jun. 27, 1995
TITLE: Hybrid immunoglobulins
INVENTOR: Daniel J. Capon, San Mateo, CA
Laurence A. Lasky, Sausalito, CA
ASSIGNEE: Genentech, Inc., San Francisco, CA (U.S. corp.)
APPL-NO: 07/986,931
DATE FILED: Dec. 8, 1992
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: John D. Ulm
LEGAL-REP: Ginger R. Dreger

US PAT NO: 5,420,264 :IMAGE AVAILABLE: L4: 37 of 49
DATE ISSUED: May 30, 1995
TITLE: Non-human primate CD4 polypeptides, human CD4 molecules capable of glycosylation, fragments thereof, fusion proteins thereof, genetic sequences thereof, and the use thereof
INVENTOR: Brian Seed, Boston, MA
David Camerini, Los Angeles, CA
ASSIGNEE: The General Hospital Corporation, Boston, MA (U.S. corp.)
APPL-NO: 07/914,634
DATE FILED: Jul. 17, 1992
ART-UNIT: 187
PRIM-EXMR: Margaret Moskowitz Parr
ASST-EXMR: Bradley L. Sisson
LEGAL-REP: Sterne, Kessler, Goldstein & Fox

US PAT NO: 5,418,147 :IMAGE AVAILABLE: L4: 38 of 49
DATE ISSUED: May 23, 1995
TITLE: Glycosyl-phosphatidylinositol-specific phospholipase D
INVENTOR: Kuo-Sen Huang, Livingston, NJ
Jarema P. Kochan, Verona, NJ
Shirley H. Li, Glen Ridge, NJ
Yu-Ching E. Pan, Pine Brook, NJ
Bernard J. Scallon, Frazer, PA
Thomas C. H. Tsang, Belleville, NJ
ASSIGNEE: Hoffmann-La Roche Inc., Nutley, NJ (U.S. corp.)
APPL-NO: 07/860,825
DATE FILED: Mar. 31, 1992
ART-UNIT: 184
PRIM-EXMR: Robert A. Wax
ASST-EXMR: Keith D. Hendricks
LEGAL-REP: George M. Gould, William H. Epstein, Catherine R. Roseman

US PAT NO: 5,367,056 :IMAGE AVAILABLE: L4: 39 of 49
DATE ISSUED: Nov. 22, 1994
TITLE: Endothelial cell-leukocyte adhesion molecules (ELAMs) and molecules involved in leukocyte adhesion (MILAs)
INVENTOR: Catherine A. Hession, South Weymouth, MA
Roy R. Lobb, Westwood, MA
Susan E. Goelz, Winchester, MA
Laurelee Osborn, Brighton, MA
Christopher D. Benjamin, Beverly, MA
Margaret D. Rosa, Winchester, MA
ASSIGNEE: Biogen, Inc., Cambridge, MA (U.S. corp.)
APPL-NO: 08/035,674
DATE FILED: Mar. 23, 1993
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: Karen Cochrane Carlson
LEGAL-REP: James F. Haley, Jr., Gary L. Creason

US PAT NO: 5,359,046 :IMAGE AVAILABLE: L4: 40 of 49
DATE ISSUED: Oct. 25, 1994
TITLE: Chimeric chains for receptor-associated signal transduction pathways
INVENTOR: Daniel J. Capon, Hillsborough, CA
Arthur Weiss, Mill Valley, CA
Brian A. Irving, San Francisco, CA
Margo R. Roberts, San Francisco, CA
Krisztina Zsebo, Woodside, CA
ASSIGNEE: Cell Genesys, Inc., Foster City, CA (U.S. corp.)
The Regents of the University of California, Oakland, CA (U.S. corp.)
APPL-NO: 07/988,194
DATE FILED: Dec. 9, 1992
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: Gian P. Wang
LEGAL-REP: Bertram I. Rowland

US PAT NO: 5,349,053 :IMAGE AVAILABLE: L4: 41 of 49
DATE ISSUED: Sep. 20, 1994
TITLE: Chimeric ligand/immunoglobulin molecules and their uses
INVENTOR: Nicholas F. Landolfi, Mountain View, CA
ASSIGNEE: Protein Design Labs, Inc., Mountain View, CA (U.S. corp.)
APPL-NO: 08/076,263
DATE FILED: Jun. 10, 1993
ART-UNIT: 182
PRIM-EXMR: Garnette D. Draper
LEGAL-REP: Townsend and Townsend Khourie and Crew

US PAT NO: 5,336,603 :IMAGE AVAILABLE: L4: 42 of 49
DATE ISSUED: Aug. 9, 1994
TITLE: CD4 adheson variants
INVENTOR: Daniel J. Capon, San Mateo, CA
Timothy J. Gregory, Hillsborough, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
APPL-NO: 07/936,190
DATE FILED: Aug. 26, 1992
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: John D. Ulm
LEGAL-REP: Ginger R. Dreger, Janet E. Hasak

US PAT NO: 5,329,028 :IMAGE AVAILABLE: L4: 43 of 49
DATE ISSUED: Jul. 12, 1994
TITLE: Carbohydrate-directed cross-linking reagents
INVENTOR: Avi J. Ashkenazi, San Mateo, CA
Steven M. Chamow, San Mateo, CA
Timothy P. Kogan, Sugar Land, TX
ASSIGNEE: Genentech, Inc., San Francisco, CA (U.S. corp.)
APPL-NO: 07/926,077
DATE FILED: Aug. 5, 1992
ART-UNIT: 129
PRIM-EXMR: Richard L. Raymond
LEGAL-REP: Ginger R. Dreger

US PAT NO: 5,272,263 :IMAGE AVAILABLE: L4: 44 of 49
DATE ISSUED: Dec. 21, 1993
TITLE: DNA sequences encoding vascular cell adhesion molecules (VCAMS)
INVENTOR: Catherine A. Hession, South Weymouth, MA
Roy R. Lobb, Westwood, MA

Susan E. Goelz, Winchester, MA
Laurelee Osborn, Brighton, MA
Christopher D. Benjamin, Beverly, MA
Margaret D. Rosa, Winchester, MA
ASSIGNEE: Biogen, Inc., Cambridge, MA (U.S. corp.)
APPL-NO: 07/452,675
DATE FILED: Dec. 18, 1989
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: R. Cochrane Carlson
LEGAL-REP: James F. Haley, Jr., John R. Storella, Gary L. Creason

US PAT NO: 5,234,905 :IMAGE AVAILABLE: L4: 45 of 49
DATE ISSUED: Aug. 10, 1993
TITLE: Soluble CD4 molecules modified to prolong circulating half-life
INVENTOR: J. Fred Kolhouse, Denver, CO
John C. Deutsch, Denver, CO
ASSIGNEE: University of Colorado Foundation, Inc., Boulder, CO (U.S. corp.)
APPL-NO: 07/669,849
DATE FILED: Feb. 22, 1991
ART-UNIT: 184
PRIM-EXMR: Robert A. Wax
ASST-EXMR: Stephen Walsh
LEGAL-REP: Greenlee & Winner

US PAT NO: 5,225,538 :IMAGE AVAILABLE: L4: 46 of 49
DATE ISSUED: Jul. 6, 1993
TITLE: Lymphocyte homing receptor/immunoglobulin fusion proteins
INVENTOR: Daniel J. Capon, San Mateo, CA
Laurence A. Lasky, Sausalito, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
APPL-NO: 07/808,122
DATE FILED: Dec. 16, 1991
ART-UNIT: 182
PRIM-EXMR: Robert J. Hill, Jr.
ASST-EXMR: John D. Ulm
LEGAL-REP: Ginger R. Dreger

US PAT NO: 5,212,075 :IMAGE AVAILABLE: L4: 47 of 49
DATE ISSUED: May 18, 1993
TITLE: Compositions and methods for introducing effectors to pathogens and cells
INVENTOR: Mark D. Bednarski, Berkeley, CA
Carolyn R. Bertozzi, Albany, CA
Jon O. Nagy, Rodeo, CA
ASSIGNEE: The Regents of the University of California, Oakland, CA (U.S. corp.)
APPL-NO: 07/686,342
DATE FILED: Apr. 15, 1991
ART-UNIT: 183
PRIM-EXMR: Ronald W. Griffin
LEGAL-REP: Townsend and Townsend

US PAT NO: 5,206,353 :IMAGE AVAILABLE: L4: 48 of 49
DATE ISSUED: Apr. 27, 1993
TITLE: CD-4/cytotoxic gene fusions
INVENTOR: Edward A. Berger, Rockville, MD
Bernard Moss, Bethesda, MD
Thomas R. Fuerst, Gaithersburg, MD
Ira Pastan, Potomac, MD
David Fitzgerald, Silver Spring, MD
Tamio Mizukami, Bethesda, MD
Vijay K. Chaudhary, Rockville, MD
ASSIGNEE: The United States of America as represented by the Department of Health and Human Services, Washington, DC (U.S. govt.)
APPL-NO: 07/223,270
DATE FILED: Jul. 22, 1988
ART-UNIT: 185
PRIM-EXMR: Richard A. Schwartz
ASST-EXMR: J. LeGuyader
LEGAL-REP: NIH/Office of Technology Transfer

US PAT NO: 5,116,964 :IMAGE AVAILABLE: L4: 49 of 49
DATE ISSUED: May 26, 1992
TITLE: Hybrid immunoglobulins
INVENTOR: Daniel J. Capon, San Mateo, CA
Laurence A. Lasky, Sausalito, CA
ASSIGNEE: Genentech, Inc., South San Francisco, CA (U.S. corp.)
APPL-NO: 07/440,625
DATE FILED: Nov. 22, 1989
ART-UNIT: 182
PRIM-EXMR: David L. Lacey
ASST-EXMR: John D. Ulm
LEGAL-REP: Ginger R. Dreger, Carolyn R. Adler

=> d 4664911

1. 4,664,911, May 12, 1987, Immunotoxin conjugates employing toxin B chain moieties; Jonathan W. Uhr, et al., 424/182.1, 183.1; 436/512, 519, 547, 813, 819; 530/389.3, 389.6, 391.7, 866 :IMAGE AVAILABLE:

=> log y
U.S. Patent & Trademark Office LOGOFF AT 13:10:14 ON 04 AUG 1997

Trying 9351006...Open

Welcome to STN International! Enter x:x
LOGINID:
LOGINID:ssspta1812kxb
PASSWORD:
TERMINAL (ENTER 1, 2, 3, OR ?):2

********** Welcome to STN International **********

NEWS 1 Jul 29 STN Seminar Schedule - N. America
NEWS 2 Jul 14 New NOQ Option Suppresses Search Query
NEWS 3 Jul 14 Easier Multifile Display and Print Option
NEWS 4 Jul 14 Improved Handling of Super Search Fields with SET AUDIT
NEWS 5 Jul 14 Multifile SDI is now AVAILABLE!
NEWS 6 Jul 14 New Patent Currency Keyword in DISPLAY, PRINT, and SDI
NEWS 7 Jul 15 ABCD - German Manufacturers Guide new on STN
NEWS 8 Jul 15 Russian Scientific News Database RUSSCI new on STN
NEWS 9 Jul 21 ULIDAT enhanced by Chemical Names and CAS Registry Numbers
NEWS 10 Jul 23 Free Connect Time in INPAMONITOR in August/September

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS INTER General Internet Information
NEWS LOGIN Welcome Banner and News Items
NEWS PHONE Direct Dial and Telecommunication Network Access to STN
NEWS WWW CAS World Wide Web Site (general information)

Enter NEWS followed by the item number or name to see news on that specific topic.

All use of STN is subject to the provisions of the STN Customer agreement. Please note that this agreement limits use to scientific research. Use for software development or design or implementation of commercial gateways or other similar uses is prohibited and may result in loss of user privileges and other penalties.

********** STN Columbus **********

FILE 'HOME' ENTERED AT 13:11:24 ON 04 AUG 1997

=> file medline hcaplus

COST IN U.S. DOLLARS	SINCE FILE ENTRY	SESSION	TOTAL
FULL ESTIMATED COST		0.15	0.15

FILE 'MEDLINE' ENTERED AT 13:11:59 ON 04 AUG 1997

FILE 'HCAPLUS' ENTERED AT 13:11:59 ON 04 AUG 1997
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
COPYRIGHT (C) 1997 AMERICAN CHEMICAL SOCIETY (ACS)

=> s cd4

L1 29014 FILE MEDLINE
L2 16200 FILE HCAPLUS

TOTAL FOR ALL FILES
L3 45214 CD4

=> s immunoglobulin# or igg#

L4 156280 FILE MEDLINE
L5 75991 FILE HCAPLUS

TOTAL FOR ALL FILES
L6 232271 IMMUNOGLOBULIN# OR IGG#

=> s (fusion protein#) or (fusion polypeptide#) or chimer? or hybrid

L7 63434 FILE MEDLINE
L8 75902 FILE HCAPLUS

TOTAL FOR ALL FILES
L9 139336 (FUSION PROTEIN#) OR (FUSION POLYPEPTIDE#) OR CHIMER? OR HYBRID

=> s l3 (p) l6 (p) l9

L10 120 FILE MEDLINE
L11 97 FILE HCAPLUS

TOTAL FOR ALL FILES
L12 217 L3 (P) L6 (P) L9

=> s l12 and py>1991

L13 97 FILE MEDLINE
L14 75 FILE HCAPLUS

TOTAL FOR ALL FILES
L15 172 L12 AND PY>1991

=> s l12 not l15

L16 23 FILE MEDLINE
L17 22 FILE HCAPLUS

TOTAL FOR ALL FILES
L18 45 L12 NOT L15

=> dup rem l18

PROCESSING COMPLETED FOR L18
L19 34 DUP REM L18 (11 DUPLICATES REMOVED)

=> d bib ab 1-

L19 ANSWER 1 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1991:533999 HCAPLUS
DN 115:133999
TI ***Chimeric*** ***immunoglobulin*** for ***CD4*** receptors
IN Ghrayeb, John; Knight, David M.; Looney, James E.
PA Centocor, Inc., USA
SO PCT Int. Appl., 35 pp.
CODEN: PIXXD2
PI WO 9110722 A2 910725
DS W: CA, JP, US
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE
AI WO 90-US7671 901227
PRAI US 89-457389 891227
DT Patent
LA English
AB A chimeric antibody is provided comprising a variable or antigen-binding region of nonhuman origin specific for the CD4 receptor and a const. region of human origin. The antibody is useful as a therapeutic agent for autoimmune disorders. Thus light and heavy chain variable region genes were cloned from murine hybridoma M-T412 [producing anti-CD4 monoclonal antibody (MAb)]. The cloned genes were joined to human .kappa. and G1 const. region genes in expression vectors. The chimeric antibody was purified from tissue culture supernatant of cell line JL3A3. When a preferred chimeric anti-CD4 MAb (cM-T412) was administered to chimpanzees, the antibody was well tolerated and circulating CD4 cell no. was markedly decreased from the 1st dose through 2-3 wk after the last dose. The CD4-pos. cells increased in no. 3-4 wk post dose, but remained depressed in treated animals relative to control animals for 3-4 mo. Administration of a preferred chimeric anti-CD4 MAb to human patients with refractory rheumatoid arthritis resulted in significant improvement of symptoms.

L19 ANSWER 2 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1992:39674 HCAPLUS
DN 116:39674
TI CD4-specific recombinant antibody
IN Jolliffe, Linda Kay; Zivin, Robert Allan; Pulito, Virginia Lee; Adair, John Robert; Athwal, Diljeet Singh
PA Ortho Pharmaceutical Corp., USA
SO PCT Int. Appl., 96 pp.
CODEN: PIXXD2
PI WO 9109966 A1 910711
DS W: AT, AU, BB, BG, BR, CA, CH, DE, DK, ES, FI, GB, GR, HU, JP, KP, KR, LK, LU, MC, MG, MW, NL, NO, RO, SD, SE, SU, US
RW: AT, BE, BF, BJ, CF, CG, CH, CM, DE, DK, ES, FR, GA, GB, GR, IT, LU, ML, MR, NL, SE, SN, TD, TG
AI WO 90-GB2015 901221
PRAI GB 89-28874 891221
DT Patent
LA English
AB A complementarity-detg. region (CDR)-grafted antibody has .gtoreq.1 chain wherein the framework regions are predominantly derived from a 1st antibody (acceptor) and .gtoreq.1 CDR is derived from 2nd antibody (donor), the CDR-grafted antibody being capable of binding to the CD4 antigen. In chimeric antibodies, certain amino acid residues in the framework regions derived from human antibodies are converted to correspond to the equiv. amino acid in the donor antibody. Cloning and prodn. of chimeric OKT4A monoclonal antibodies are presented. The chimeric OKT4A antibodies bound CD4 and inhibited T-cell proliferation.

L19 ANSWER 3 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1991:649565 HCAPLUS
DN 115:249565
TI Immunoglobulin-binding fusion proteins and their recombinant manufacture
IN Zanetti, Maurizio; Lenert, Petar; Golub, Edward; Kroon, Daniel
PA University of California, Oakland, USA; Ortho Pharmaceutical Corp.
SO PCT Int. Appl., 126 pp.
CODEN: PIXXD2
PI WO 9103562 A1 910321
DS W: CA, JP, KR
RW: AT, BE, CH, DE, DK, ES, FR, GB, IT, LU, NL, SE
AI WO 90-US5030 900906
PRAI US 89-404968 890908
US 90-541269 900620
DT Patent
LA English
AB Ig-binding polypeptides comprising a heavy chain variable region (VH)-binding polypeptide of the CD4 receptor and a Fc-binding polypeptide of staphylococcal protein A or streptococcal protein G are described. The polypeptides can be prepd. by expression of synthetic chimeric genes in a recombinant host. These fusion proteins can be used for purifying Ig or in the prepn. of Ig-free substances. The prepn. of a fusion protein of the VH-binding polypeptide p21-49 and a Fc-binding polypeptide using a com. vector pASI-3 which can express the gene in Escherichia coli and Staphylococcus aureus using the protein A promoter and signal sequence was shown.

L19 ANSWER 4 OF 34 MEDLINE
AN 91334404 MEDLINE
TI Resistance of primary isolates of human immunodeficiency virus type 1 to soluble CD4 is independent of CD4-rgp120 binding affinity [published erratum appears in Proc Natl Acad Sci U S A 1992 Feb 15;89(4):1517].
AU Ashkenazi A; Smith D H; Marsters S A; Riddle L; Gregory T J; Ho D D; Capon D J
CS Department of Immunobiology, Genentech, Inc., South San Francisco, CA 94080.
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES
OF AMERICA, (1991 Aug 15) 88 (16) 7056-60.
Journal code: PV3. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 9111
AB The infection of human cells by laboratory strains of human immunodeficiency virus type 1 (HIV-1) can be blocked readily in vitro by recombinant soluble ***CD4*** and ***CD4*** - ***immunoglobulin*** ***hybrid*** molecules. In contrast, infection by primary isolates of HIV-1 is much less sensitive to blocking in vitro by soluble ***CD4*** -based molecules. To investigate the molecular basis for this difference between HIV-1 strains, we isolated the gp120-encoding genes from several ***CD4*** -resistant and ***CD4*** -sensitive HIV-1 strains and characterized the ***CD4*** -binding properties of their recombinant gp120 (rgp120) products. Extensive amino acid sequence variation was found between the gp120 genes of ***CD4*** -resistant and ***CD4*** -sensitive HIV-1 isolates. However, the ***CD4*** -binding affinities of rgp120 from strains with markedly different ***CD4*** sensitivities were essentially the same, and only small differences were observed in the kinetics of ***CD4*** binding. These results suggest that the lower sensitivity of primary HIV-1 isolates to neutralization by ***CD4*** -based molecules is not due to lower binding affinity between soluble ***CD4*** and free gp120.

L19 ANSWER 5 OF 34 MEDLINE DUPLICATE 1
AN 91333020 MEDLINE
TI Recombinant CD4-selected human immunodeficiency virus type 1 variants with reduced gp120 affinity for CD4 and increased cell fusion capacity.
AU McKeating J; Balfe P; Clapham P; Weiss R A
CS Chester Beatty Laboratories, Institute of Cancer Research, London, United Kingdom.
SO JOURNAL OF VIROLOGY, (1991 Sep) 65 (9) 4777-85.
Journal code: KCV. ISSN: 0022-538X.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 9111
AB Variants of molecularly cloned human immunodeficiency virus type 1 (HIV-1) were analyzed following selection for the ability to replicate after exposure to soluble, recombinant ***CD4*** protein (rCD4). Two variants, 4/1 and 16/2, show 8-fold and 16-fold reduced sensitivity to rCD4 neutralization yet remain as sensitive as the parental wild-type (wt) virus to neutralization by rCD4- ***immunoglobulin*** G (***IgG***) ***chimeric*** molecules and to inhibition of cellular infection by anti- ***CD4*** antibody. The 4/1 variant is more cytopathic, with

faster cell fusion and replication kinetics than the wt virus. The gp120s derived from the 4/1 and 16/2 variants have 3-fold and 30-fold reduced binding affinities to rCD4, respectively. The 4/1 variant exhibits diminished shedding of virion gp120 induced by rCD4. The binding of and neutralization by V3 loop antibodies and other anti-gp120 antibodies is reduced for 4/1 but not for 16/2. Sequence analysis revealed a codon change at amino acid residue 435 in the C4 region of the gp120 of 16/2. This accounts for its rCD4 insensitivity, since the insertion of this mutation in the wt gp120 yields the same phenotype. The 4/1 variant has a codon change in the V3 region of gp120 (amino acid 311), which accounts for its reduced sensitivity to some neutralizing antibodies but not to rCD4. The ready selection of rCD4-resistant variants has obvious relevance for rCD4-based therapeutic stratagems.

L19 ANSWER 6 OF 34 MEDLINE
AN 92238686 MEDLINE
TI Phase 1 study of recombinant human CD4-immunoglobulin G therapy of patients with AIDS and AIDS-related complex.
AU Hodges T L; Kahn J O; Kaplan L D; Groopman J E; Volberding P A; Amman A J; Arri C J; Bouvier L M; Mordenti J; Izu A E; et al
CS New England Deaconess Hospital, Boston, Massachusetts 02215.
SO ANTIMICROBIAL AGENTS AND CHEMOTHERAPY, (1991 Dec) 35 (12) 2580-6.
Journal code: 6HK. ISSN: 0066-4804.
CY United States
DT (CLINICAL TRIAL)
Journal; Article; (JOURNAL ARTICLE)
(MULTICENTER STUDY)
LA English
FS Priority Journals
EM 9207
AB The safety and pharmacokinetics of recombinant ***CD4*** - ***immunoglobulin*** G (rCD4- ***IgG***) were evaluated in a phase 1 study with dose escalation. A total of 16 patients, 6 with AIDS and 10 with AIDS-related complex, were evaluated at two university-affiliated hospital clinics. rCD4- ***IgG*** was administered once weekly for 12 weeks to four patients each at doses of 0.03, 0.1, 0.3, and 1.0 mg/kg of body weight. Dosing was intravenous for two patients in the 1.0-mg/kg dose group and intramuscular for the remaining patients. Dosing was intravenous for two patients in the 1.0-mg/kg dose group and intramuscular for the remaining patients. Pharmacokinetic, toxicity, and immunologic variables were monitored with all patients. Administration of rCD4- ***IgG*** was well tolerated, with no important clinical or immunologic toxicities noted. No subjects required dose reduction or discontinuation of therapy due to toxicity. No consistent changes were seen in human immunodeficiency virus antigen levels in serum or ***CD4*** lymphocyte populations. The volume of distribution was small, and compared with that of rCD4, the half-life of the ***hybrid*** molecule was markedly prolonged following intramuscular or intravenous administration. The rate and extent of absorption following intramuscular dosing were variable. Intramuscular administration of rCD4- ***IgG*** appears to be inferior to intravenous dosing from a pharmacokinetic standpoint, with lower peak concentrations and variable absorption. After intravenous administration, peak concentrations of rCD4- ***IgG*** in serum (20 to 24 micrograms/ml) that have shown antiviral activity in vitro against more sensitive clinical isolates of human immunodeficiency virus were achieved. The peak concentrations in serum after intramuscular administration were below these levels.(ABSTRACT TRUNCATED AT 250 WORDS)

L19 ANSWER 7 OF 34 MEDLINE DUPLICATE 2
AN 91255669 MEDLINE
TI Lectin-like cell adhesion molecule 1 mediates leukocyte rolling in mesenteric venules in vivo.
AU Ley K; Gaehtgens P; Fennie C; Singer M S; Lasky L A; Rosen S D
CS Department of Physiology, Freie Universitat Berlin, Germany..
NC GM23547 (NIGMS)
P60AR20684 (NIAMS)
SO BLOOD, (1991 Jun 15) 77 (12) 2553-5.
Journal code: A8G. ISSN: 0006-4971.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 9109
AB During the inflammatory response, granulocytes and other leukocytes adhere to and emigrate from small venules. Before firm attachment, leukocytes are observed rolling slowly along the endothelium in venules of most tissues accessible to intravital microscopy. The molecular mechanism underlying this early type of leukocyte-endothelial interaction is unknown. Leukocyte rolling was investigated in venules (diameter, 40 microns) of the exposed rat mesentery. Micro-infusion of a recombinant soluble ***chimera*** (LEC- ***IgG***) of the murine homing receptor lectin-like cell adhesion molecule 1 (LEC-CAM 1; gp90MEL) into individual venules reduced the number of rolling leukocytes by 89% +/- 2% (mean +/- SEM, n = 20 venules), while a similar ***CD4*** ***chimera*** (***CD4*** - ***IgG***) had no effect (inhibition 14% +/- 7%, n = 25). Rolling was also greatly reduced by a polyclonal serum against LEC-CAM 1 (inhibition 84% +/- 3%, n = 35); preimmune serum was ineffective (11% +/- 13% inhibition, n = 28). These findings indicate that LEC-CAM 1 mediates the adhesive interaction underlying leukocyte rolling and thus may play an important role in inflammation and in pathologic conditions involving leukocytes.

L19 ANSWER 8 OF 34 MEDLINE DUPLICATE 3
AN 91170766 MEDLINE
TI Transient T and B cell activation after neonatal induction of tolerance to MHC class II or Mls alloantigens.
AU Schurmans S; Brighouse G; Kramer G; Wen L; Izui S; Merino J; Lambert P H
CS Department of Pathology, CMU, Geneva, Switzerland..
SO JOURNAL OF IMMUNOLOGY, (1991 Apr 1) 146 (7) 2152-60.
Journal code: IFB. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 9106
AB The neonatal injection of semiallogeneic F1 spleen cells into newborn parental mice results in the induction of tolerance to the corresponding alloantigen (alloAg) and ***chimerism*** . In these F1 cell-injected mice, we have previously observed that this state of specific tolerance is associated with the development of a transient lupus-like autoimmune syndrome. In this study, we show that neonatal injection of mice with spleen cells differing from the host at major histocompatibility complex (MHC) class I, class II, class (I + II), or minor lymphocyte stimulating (Mls) alloAg induced a state of specific tolerance characterized by the absence of alloreactive CTL and/or Th cell responses in the spleen and the thymus of 6- to 12-week-old injected mice. However, in mice rendered tolerant to MHC class II or class (I + II) alloAg, the presence of high levels of ***IgG1*** antibodies, of circulating immune complexes, of anti-ssDNA autoantibodies, and of tissue lesions were transiently observed. In these mice, an increased Ia Ag expression on lymphoid spleen cells was also detected at 1 wk. The elevated production of ***IgG1*** and the overexpression of Ia Ag were almost completely prevented by treatment with an anti-IL-4 mAb. Such manifestations of B cell activation and autoimmunity were not observed in mice neonatally injected with F1 cells differing from the host only at MHC class I Ag. In mice neonatally tolerized to Mls Ag, a transient increase in IgG2a production and an overexpression of Ia Ag were detected without features of autoimmunity, and were prevented by anti-INF-gamma mAb treatment. In mice rendered tolerant to MHC class II, class (I + II), or Mls alloAg at birth, the manifestations of B cell activation were associated with the presence of in vivo-activated alloreactive ***CD4*** + T cells in the spleen--but not the thymus--of 1-wk-old injected mice. Together, these results suggest that in mice neonatally injected with semiallogeneic F1 cells, the process of tolerance induction is not efficient during the early postnatal period, and could allow the maturation and peripheralization of some alloreactive ***CD4*** + T cells, leading to transient B cell activation and, depending on the alloAg, to autoimmunity.

L19 ANSWER 9 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1991:162234 HCAPLUS
DN 114:162234
TI Cellular immunity to HIV activated by CD4 fused to T cell or Fc receptor polypeptides
AU Romeo, Charles; Seed, Brian
CS Dep. Genet., Harvard Med. Sch., Boston, MA, 02114, USA
SO Cell (Cambridge, Mass.) (1991), 64(5), 1037-46
CODEN: CELLB5; ISSN: 0092-8674
DT Journal
LA English
AB Functionally simplified T cell and Fc receptor chimeras are described that are capable of directing CD8+ cytotoxic T lymphocytes (CTLs) to specifically recognize and lyse cells expressing HIV envelope proteins. Target cells bearing HLA-DR mols. are not recognized by CTL armed with the chimeras. The variety of cell types in which the native receptors are active suggests multiple possibilities for antiviral intervention through genetic means.

L19 ANSWER 10 OF 34 MEDLINE DUPLICATE 4
AN 92075347 MEDLINE
TI Soluble CD4-PE40 is cytotoxic for a transfected mammalian cell line stably expressing the envelope protein of human immunodeficiency virus (HIV-1), and cytotoxicity is variably inhibited by the sera of HIV-1-infected patients.
AU Pitts T W; Bohanon M J; Leach M F; McQuade T J; Marschke C K; Merritt J A; Wierenga W; Nicholas J A
CS Department of Cancer and Infectious Diseases, Upjohn Laboratories, Kalamazoo, MI 49007.
SO AIDS RESEARCH AND HUMAN RETROVIRUSES, (1991 Sep) 7 (9) 741-50.
Journal code: ART. ISSN: 0889-2229.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 9203
AB Sera were obtained from 50 individuals infected with human

immunodeficiency virus type 1 or from HIV-1-uninfected individuals before or after vaccination with recombinant gp160. These sera were evaluated for activity antagonistic to the cell-killing activity of the ***chimeric*** Pseudomonas exotoxin ***hybrid*** protein, sCD4-PE40. For these studies, Chinese hamster ovary (CHO) cells were transfected with a ***chimeric*** plasmid encoding the tat, rev, and envelope genes of HIV-1 and a cell line was selected for stable expression of the envelope glycoproteins at the cell surface (CHO-env). Cytotoxicity of sCD4-PE40 for CHO-env in the presence or absence of added human serum was quantitated spectrophometrically following enzymatic reduction of a tetrazolium bromide within the mitochondria of viable cells (MTT assay). Several HIV+ sera inhibited the cytotoxic activity of sCD4-PE40; the antagonist had properties consistent with those of ***immunoglobulins*** in that it was heat stable, absorbed by protein A, and reversible by increasing the concentration of sCD4-PE40. Of 15 HIV+ sera which strongly reacted with gp120, 11 (73%) also potently inhibited sCD4-PE40 cytotoxicity, and cytotoxicity was inhibited by sera from some HIV- individuals after, but not before, immunization with gp160. These data suggested a role for antibody to gp120 in the antagonistic activity. However, not all sera with antibody to gp120 antagonized sCD4-PE40 cytotoxicity and high levels of antagonist activity were frequently (40%) found in HIV+ sera lacking immunoblot-detectable antibody to gp120, or antibody to either ***CD4*** or PE40. Grouping of the HIV+ sera according to the patients' absolute number of ***CD4*** + cells revealed that the degree of inhibition of sCD4-PE40 cytotoxicity approached a Gaussian distribution, suggesting that persons with ***CD4*** + cell counts between 200 and 700/mm3 may be more likely to possess significant levels of serum antagonist. This data have implications for the clinical development of sCD4-PE40 or other sCD4-based therapeutics in the management of HIV-1 infection.

L19 ANSWER 11 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1991:512552 HCAPLUS
DN 115:112552
TI Prevention of HIV-1 IIIB infection in chimpanzees by CD4 immunoadhesin
AU Ward, Rebecca H. R.; Capon, Daniel J.; Jett, Catherine M.; Murthy, Krishna K.; Mordenti, Joyce; Lucas, Catherine; Frie, Steve W.; Prince, Alfred M.; Green, James D.; Eichberg, Jorg W.
CS Genentech Inc., S. San Francisco, CA, 94080, USA
SO Nature (London) (1991), 352(6334), 434-6
CODEN: NATUAS; ISSN: 0028-0836
DT Journal
LA English
AB The first step in infection by the human immunodeficiency virus (HIV) is the specific binding of gp120, the envelope glycoprotein of HIV, to its cellular receptor, ***CD4*** . To det. whether ***CD4*** analogs can protect an uninfected individual from challenge with HIV, the chimpanzee model system of cell-free HIV infection was used. Chimpanzees, infected with the IIIB strain of HIV-1, became viremic within about 4-6 wk of challenge, although they did not develop the profound ***CD4*** + T-cell depletion and immunodeficiency characteristic of HIV infection in humans. ***CD4*** immunoadhesin (***CD4*** - ***IgG***), a ***chimeric*** mol. consisting of the N-terminal 2 Ig-like regions of ***CD4*** joined to the Fc region of human ***IgG1*** , was selected as the ***CD4*** analog for testing because it has a longer half-life than ***CD4*** , contributed by the ***IgG*** Fc portion of the mol. Here, pretreatment with ***CD4*** - ***IgG*** prevented infection of chimpanzees with HIV-1. The need for a preventative agent is particularly acute in perinatal HIV transmission. As recombinant ***CD4*** - ***IgG*** , like the parent ***IgG*** mol., efficiently crosses the primate placenta, it may be possible to set up an immune state in a fetus before HIV transfer occurs, thus preventing infection.

L19 ANSWER 12 OF 34 MEDLINE
AN 91205303 MEDLINE
TI Engraftment and development of human T and B cells in mice after bone marrow transplantation.
AU Lubin I; Faktorowich Y; Lapidot T; Gan Y; Eshhar Z; Gazit E; Levite M; Reisner Y
CS Department of Biophysics, Weizmann Institute of Science, Rehovot, Israel..
SO SCIENCE, (1991 Apr 19) 252 (5004) 427-31.
Journal code: UJ7. ISSN: 0036-8075.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 9107
AB A model for human lymphocyte ontogeny has been developed in a normal mouse. Human bone marrow, depleted of mature T and B lymphocytes, and bone marrow from mice with severe combined immunodeficiency were transplanted into lethally irradiated BALB/c mice. Human B and T cells were first detected 2 to 4 months after transplantation and persisted for at least 6 months. Most human thymocytes (30 to 50 percent of total thymocytes) were CD3+ ***CD4*** +CD8+. Human ***immunoglobulin*** was detected in some ***chimeras*** , and a human antibody response to dinitrophenol could be generated after primary and secondary immunization.

L19 ANSWER 13 OF 34 MEDLINE
AN 92062808 MEDLINE
TI Autoimmune syndrome after neonatal induction of tolerance to alloantigens: analysis of the specificity and of the cellular and genetic origin of autoantibodies.
AU Schurmans S; Merino J; Qin H Y; Kramar G; Duchosal M; Skalli O; Benzonana G; Gabbiani G; Lambert P H
CS WHO Immunology Research and Training Center, Geneva, Switzerland..
SO AUTOIMMUNITY, (1991) 9 (4) 283-91.
Journal code: A5H. ISSN: 0891-6934.
CY Switzerland
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 9203
AB BALB/c mice neonatally injected with 10(8) semiallogeneic (C57BL/6 x BALB/c)F1 spleen cells become tolerant to the H-2b alloantigens, but also develop a wide range of autoimmune manifestations characteristic of systemic lupus erythematosus (SLE). Indeed, in these mice, the presence of a hypergammaglobulinaemia, autoantibodies--including anti-ssDNA, anti-platelet, thymocytotoxic and rheumatoid factor antibodies--circulating immune complexes, cryoglobulins as well as renal glomerular deposition of ***immunoglobulins*** have been observed. In this study, we have shown that the allogenic effect and B cell chimaerism which characterize these F1 cell-injected mice is associated with the expression of a large spectrum of autoantibodies, including anti-ssDNA and anti-cytoskeleton antibodies, and that these autoantibodies are not multispecific. We took advantage of the fact that, in this model, autoantibodies are exclusively produced by F1 donor B cells to inject newborn BALB/c mice with F1 Xid spleen cells lacking the CD5+ B cell subset. Injection of 2 x 10(8) F1 Xid spleen cells triggers the production of anti-ssDNA as well as anti-BrMRBC antibodies, and these mice developed tissue lesions. Finally, analysis of the VH gene family expressed by monoclonal autoantibodies derived from F1 cell-injected mice showed that they used the 2 largest families J558 and 7183. These results suggest that the allogenic effect and B cell ***chimerism*** which characterize the neonatal induction of tolerance to MHC alloantigens is associated with the selective triggering of autoreactive B cells producing monospecific ***IgG*** autoantibodies. They also imply that upon stimulation by persisting alloreactive ***CD4*** + T cells, either CD5- B cells are able to produce autoantibodies or autoantibody-producing CD5+ B cells can differentiate from Xid spleen cells.

L19 ANSWER 14 OF 34 MEDLINE
AN 92039088 MEDLINE
TI Chimerization of antibodies by isolation of rearranged genomic variable regions by the polymerase chain reaction.
AU Weissenhorn W; Weiss E; Schwirzke M; Kaluza B; Weidle U H
CS Institut fur Immunologie, Universitat Munchen, F.R.G.
SO GENE, (1991 Oct 15) 106 (2) 273-7.
Journal code: FOP. ISSN: 0378-1119.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 9202
AB We describe a new method for amplification, by polymerase chain reaction (PCR), of rearranged segments encoding the variable part of light and heavy chains of an antibody (Ab) from the chromosomal DNA of hybridoma cells for the ***chimerization*** of Abs. A fundamental prerequisite for this is the knowledge of the exact sequences in the 5'-untranslated region of light and heavy chain mRNA, and of the joining segment used for rearrangement. This allows the design of nondegenerated oligodeoxyribonucleotides for PCR. The primer design permits directional cloning of the amplified, promoterless fragments into cassette vectors, in which they will be linked to the appropriate human constant domains and ***immunoglobulin*** (Ig) promoter/enhancer elements. The method is illustrated for ***chimerization*** of an Ab directed against the human T-lymphocyte antigen, ***CD4*** . The ***chimerized*** Ab is secreted in abundant quantities after transfection of the engineered plasmids into non-Ig-producing myeloma cells.

L19 ANSWER 15 OF 34 MEDLINE
AN 91277618 MEDLINE
TI The expression of several T cell-specific and novel genes is repressed by trans-acting factors in immature T lymphoma clones.
AU Wilkinson M F; Doskow J; von Borstel R 2d; Fong A M; MacLeod C L
CS Vollum Institute for Advanced Biomedical Research and Microbiology Department, Oregon Health Sciences University, Portland 97201..
NC CA-37778 (NCI)
CA-42495 (NCI)
GM-39586 (NIGMS)
SO JOURNAL OF EXPERIMENTAL MEDICINE, (1991 Jul 1) 174 (1) 269-80.
Journal code: I2V. ISSN: 0022-1007.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English

FS Priority Journals; Cancer Journals
EM 9110
AB Cell surface proteins encoded by members of the ***immunoglobulin*** supergene family are sequentially expressed during T cell ontogeny. The molecular mechanisms responsible for the regulation of these surface molecules are not well understood. To investigate this issue, we used a series of well characterized T lymphoma cell clones with phenotypes characteristic of distinct stages of early thymocyte maturation. Somatic cell hybrids formed from these cell lines were employed to detect the presence of negative regulatory molecules. The expression of ***CD4*** and CD8 was strongly repressed in hybrids formed between a ***CD4*** + CD8+ lymphoma clone and "immature" ***CD4*** - CD8- lymphoma clones. Individual subunits of the T cell receptor (TCR)/CD3 complex displayed independent regulation in unique patterns in ***hybrid*** cells. Hybrids formed by fusing CD3+ and CD3- cells completely repressed CD3-delta mRNA expression while CD3-gamma, -epsilon, and -zeta transcripts were moderately inhibited or codominantly regulated. Similar to CD3-delta, interleukin 2R-alpha(IL-2R-alpha), and TCR-beta mRNA accumulation was trans-negatively regulated. Transcription rate measurements demonstrated that the inhibition of ***CD4*** , CD8, CD3-gamma, CD3-epsilon, TCR-beta, and IL-2R-alpha mRNA accumulation in ***hybrid*** cells was exerted, at least in part, at the transcriptional level. To test whether repressional regulation is a general feature of T cells, we examined the regulation of six novel genes which were selected solely on the basis of their differential expression between two of the cell lines used in this study. Five of the six novel gene transcripts were repressed in the somatic cell hybrids. Thus, inhibitor factors appear to play a general role in controlling T cell gene expression. The model system presented here may be useful for the identification and characterization of repressor molecules responsible for the regulation of genes expressed during T cell ontogeny.

L19 ANSWER 16 OF 34 MEDLINE DUPLICATE 5
AN 91376377 MEDLINE
TI Infection of monocytic cells by HIV1: combined role of FcR and CD4.
AU Jouault T; Chapuis F; Bahraoui E; Gluckman J C
CS Laboratoire de Biologie et Genetique des Deficits Immunitaires, CERVI, Groupe Hospitalier Pitie-Salpetri`ere, Paris, France.
SO RESEARCH IN VIROLOGY, (1991 Mar-Jun) 142 (2-3) 183-8. Journal code: R7E. ISSN: 0923-2516.
CY France
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 9112
AB Human immunodeficiency virus (HIV) complexed with human anti-HIV ***IgG*** can attach to Fc gamma receptors (Fch) of mononuclear phagocytes. To determine whether the FcR-mediated infection that results also requires interaction between HIV gp120 and cell membrane ***CD4*** , monocytic cells of the U937 line were transiently treated with phorbol 12,13-dibutyrate (PDB) so that they temporarily presented a ***CD4*** -FcR+ phenotype at the time of H(V infection. HIV production was not abolished, but only significantly delayed after infection of these cells with free virus. Leu3a monoclonal antibody or soluble recombinant ***CD4*** completely blocked this delayed infection. This indicates that enough ***CD4*** still remained at the membrane to allow infection of a reduced cell number. Infection of PDB-treated cells with virus preincubated with high anti-HIV ***IgG*** concentrations was inhibited, contrasting with what was observed with control cells infected under the same conditions. Inhibition of infection was also observed when HIV became attached to untreated U937 cells through the binding of ***CD4*** - ***IgG*** ***hybrid*** molecules to FcR. Thus, the binding of ***IgG*** -coated virus to FcR is not sufficient in itself to elicit productive infection of monocytic cells, which still requires the interaction of viral gp120 and membrane ***CD4*** .

L19 ANSWER 17 OF 34 MEDLINE
AN 92149490 MEDLINE
TI Evaluation of anti-human immunodeficiency virus effect of recombinant CD4-immunoglobulin in vitro: a good candidate for AIDS treatment.
AU Chowdhury I H; Koyanagi Y; Takamatsu K; Yoshida O; Kobayashi S; Yamamoto N
CS Department of Microbiology, Tokyo Medical and Dental University School of Medicine, Japan.
SO MEDICAL MICROBIOLOGY AND IMMUNOLOGY, (1991) 180 (4) 183-92. Journal code: M58. ISSN: 0300-8584.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 9205
AB ***CD4*** molecule, a surface marker of helper T lymphocytes, interacts with gp120 of human immunodeficiency virus (HIV) with a high affinity and, hence, serves as a virus receptor. Soluble ***chimeric*** ***CD4*** - ***immunoglobulin*** (Ig) possesses anti-HIV activity due to its binding activity to gp120. Furthermore, this recombinant molecule has unique Ig-like properties representing Fc receptor-binding activity and a long half-life in vivo. In this report we have thoroughly evaluated the effect of this compound on HIV infection using different in vitro systems. Treatment with 4 micrograms/ml of recombinant ***CD4*** -Ig after infection completely blocked the HIV-specific cytopathic effect, antigen expression, and virus release in MT-4 cells, a human T cell line which is highly susceptible to HIV. Similarly, this molecule blocked the HTLV-III/B and YU-1 strains of HIV infection in peripheral blood mononuclear cells even at 1 microgram/ml. Pretreatment of the Fc receptor-positive cell line U937 with this reagent resulted not in enhancement but again in blocking of HIV infection. About 95% of HIV infection was inhibited in U937 cells when cells were treated with this compound at the time of exposure to HIV. Recombinant- ***CD4*** -Ig also completely inhibited HIV-induced syncytia formation between MOLT-4 and MOLT-4/HIV and resulting virus release at 8 and 2 micrograms/ml, respectively. Due to its stability and long half-life, this compound could be a promising therapeutic agent against HIV infection.

L19 ANSWER 18 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1991:677312 HCAPLUS
DN 115:277312
TI Biological activities of ***CD4*** - ***immunoglobulin*** ***fusion*** ***proteins***
AU Hilfenhaus, Joachim; Gregersen, Jens Peter; Langner, Klaus Dieter; Niedrig, Matthias; Reiner, Goetz; Zettlmeissl, Gerd; Seed, Brian; Anderson, Daniel C.; Fultz, Patricia N.
CS Res. Lab., Behringwerke A.-G., Marburg, Fed. Rep. Ger.
SO Vaccines 91: Mod. Approaches New Vaccines Incl. Prev. AIDS, [Annu. Meet. Mod. Approaches New Vaccines], 8th (1991), Meeting Date 1990, 77-83. Editor(s): Chanock, Robert M. Publisher: Cold Spring Harbor Lab., Plainview, N. Y.
CODEN: 57HGAV
DT Conference
LA English
AB Fusion of 2 or 4 extracellular N-terminal domains of the ***CD4*** cell-surface protein to the hinge region of human ***IgG1*** resulted in ***chimeric*** antibody-like mols. that neutralized HIV-1 in vitro and lysed HIV-1-infected cells to the same extent. One CD-4 ***fusion*** ***protein*** (the 4-domain construct) was shown to inhibit both de novo infection and cell-to-cell transmission of SIVsmm, but to a lesser extent that HIV-1. To det. whether SIV-infected macaques might be a suitable animal model for testing the biol. activity of ***CD4*** -Ig ***fusion*** ***proteins*** , the efficacy of the 4-domain construct was tested in four animals. The only effect obsd. was a transient increase in abs. nos. of ***CD4*** + cells, but no significant redn. in virus load was detected. Pharmacokinetics studies in cynomolgus monkeys showed that after i.v. administration, the 2-doamin construct had a longer half-life in this species than the 4-domain construct; thus, the 2-domain protein may be superior and the mol. of choice. Because of variation in the response of animals, in general, to infection by most SIV isolates, small nos. of SIV-infected macaques should be avoided for in vivo evaluation of potential therapies. To demonstrate efficacy using the SIV-macaque model, investigators should use sufficient nos. of animals, including a placebo control group, all of which are exptl. infected with virus at the same time.

L19 ANSWER 19 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1990:418961 HCAPLUS
DN 113:18961
TI CD4 derivatives for the treatment of infection with human immunodeficiency virus
IN Berger, Edward A.; Moss, Bernard; Fuerst, Thomas R.; Mizukami, Tamio; Pastan, Ira H.; Fitzgerald, David J. P.; Chaudhary, Vijay K.
PA United States Dept. of Commerce, USA
SO PCT Int. Appl., 74 pp.
CODEN: PIXXD2
PI WO 9001035 A1 900208
DS W: AU, JP
RW: AT, BE, CH, DE, FR, GB, IT, LU, NL, SE
AI WO 89-US3267 890724
PRAI US 88-223270 880723
US 88-283739 881213
US 89-334304 890427
DT Patent
LA English
AB Sol. derivs. of ***CD4*** antigen and selectively cytotoxic ***fusion*** ***proteins*** with Pseudomonas exotoxin A or ***IgG*** for use in the killing of human immunodeficiency virus (HIV)-infected cells. Fusion products with Igs are expected to have long serum half-lives. Plasmid PVC403 encoding a ***CD4*** -exotoxin A ***fusion*** ***protein*** was used to manuf. the protein in Escherichia coli. The purified protein was shown to bind the gp120 protein or HIV. Selective cytotoxicity of the ***fusion*** ***protein*** was demonstrated using transformed CV-1 cells expressing a gene for gp120 and a chronically infected human T-cell line 8ES with parental lines as controls. In the case of CV-1 cells the ***fusion*** ***protein*** had an ID50 for protein synthesis of 10 ng/mL vs. >103 ng/mL for the control cells. For 8ES cells the ID50 was 100 ng/mL whereas the control line showed no inhibition at 103 ng/mL.

L19 ANSWER 20 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1991:158560 HCAPLUS
DN 114:158560
TI ***Chimeric*** ***CD4*** - ***immunoglobulin*** polypeptides for treatment of AIDS
IN Karjalainen, Klaus; Traunecker, Andre
PA Hoffmann-La Roche, F., und Co. A.-G., Switz.
SO Eur. Pat. Appl., 16 pp.
CODEN: EPXXDW
PI EP 394827 A1 901031
DS R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE
AI EP 90-107393 900419
PRAI EP 89-107572 890426
EP 89-117606 890923
DT Patent
LA English
AB The title chimeric proteins comprises all or part of the first two domains of CD-4 and the const. region of a mammalian Ig heavy chain lacking the first domain. Plasmids encoding the chimeric protein of the first 2 domains of CD-4 and mouse .mu., human .gamma.1, or mouse .gamma.2a heavy chain const. regions lacking the first domain were constructed. Upon expression in mouse myeloma cells P3.times.63Ag8, chimeric protein CD4-M.mu. and CD4-M.gamma.2a were produced as a pentamer and dimer, resp. These two chimeric proteins bound gp120 of HTLV III-B. In inhibition of HIV-dependent syncytium formation in MT-2 cells, CD4-M.mu. had a 50% inhibition (ID50) of 10 ng/mL, 1000-fold less than the ID50 of CD4-M.gamma.2a and CD4-Mx; CD4-M.mu. 1-2 .mu.g/mL completely inhibited the syncytium formation. The binding of these proteins to C1q was also demonstrated.

L19 ANSWER 21 OF 34 MEDLINE
AN 90370828 MEDLINE
TI High concentrations of recombinant soluble CD4 are required to neutralize primary human immunodeficiency virus type 1 isolates.
AU Daar E S; Li X L; Moudgil T; Ho D D
CS Department of Medicine, Cedars-Sinai Medical Center, University of California, Los Angeles School of Medicine 90048.
NC AI25541 (NIAID)
AI28747 (NIAID)
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES
OF AMERICA, (1990 Sep) 87 (17) 6574-8.
Journal code: PV3. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 9012
AB There is substantial evidence supporting the ***CD4*** molecule as the principal cellular receptor for the human immunodeficiency virus type 1 (HIV-1). A number of truncated recombinant soluble ***CD4*** (sCD4) molecules have been produced and shown to easily neutralize infection of laboratory strains of HIV-1 in vitro, and clinical trials using these sCD4 preparations have begun in patients with AIDS. Infectious HIV-1 titers in the plasma and peripheral blood mononuclear cells of five patients receiving sCD4 at 30 mg/day were sequentially monitored. No significant decrease in viral titers was found during therapy. Furthermore, plasma samples from eight patients with AIDS were titrated for HIV-1 with and without the addition of sCD4 ex vivo. Despite the addition of sCD4 at up to 1 mg/ml, there was little change in plasma viral titers. Subsequently, 10 primary HIV-1 isolates were tested for their susceptibility to neutralization in vitro by one preparation of sCD4. Neutralization of these clinical isolates required 200-2700 times more sCD4 than was needed to inhibit laboratory strains of HIV-1. Similar results were observed using one other monomeric sCD4 preparation and two multimeric ***CD4*** - ***immunoglobulin*** ***hybrid*** molecules. We conclude that unlike laboratory strains, primary HIV-1 isolates require high concentrations of sCD4 for neutralization. This phenomenon may pose a formidable problem for sCD4-based therapeutics in the treatment of HIV-1 infection.

L19 ANSWER 22 OF 34 MEDLINE
AN 91043673 MEDLINE
TI [Possible applications of recombinant CD4 in the treatment of AIDS]. Possibili applicazioni del CD4 ricombinante nella terapia dell'AIDS.
AU Praglia C
SO MINERVA MEDICA, (1990 Sep) 81 (9) 655-6.
Journal code: N6M. ISSN: 0026-4806.
CY Italy
DT Journal; Article; (JOURNAL ARTICLE)
LA Italian
FS Priority Journals; Cancer Journals
EM 9102

L19 ANSWER 23 OF 34 MEDLINE DUPLICATE 6
AN 91099338 MEDLINE
TI Structural characterization of a recombinant ***CD4*** - ***IgG*** ***hybrid*** molecule.
AU Harris R J; Wagner K L; Spellman M W
CS Department of Medicinal and Analytical Chemistry, Genentech, Inc., South San Francisco, CA 94080..
SO EUROPEAN JOURNAL OF BIOCHEMISTRY, (1990 Dec 12) 194 (2) 611-20.
Journal code: EMZ. ISSN: 0014-2956.
CY GERMANY: Germany, Federal Republic of
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
OS GENBANK
EM 9104
AB ***CD4*** - ***IgG*** is a homodimer of a ***hybrid*** polypeptide consisting of the two amino-terminal domains (residues 1-180) of human ***CD4*** fused to the hinge region and the second and third constant-sequence (CH2 and CH3) Fc domains (residues 216-441) of human ***immunoglobulin*** G (***IgG*** -1). This antibody-like molecule, termed an immunoadhesin, was produced in an effort to combine the binding specificity of ***CD4*** with several potentially desirable properties of ***IgG*** molecules [Capon et al. (1989) Nature 337, 525-531]. The structural characteristics of the molecule have been evaluated to demonstrate that ***CD4*** - ***IgG*** has the same features as the N-terminal region of soluble ***CD4*** , while retaining those expected for the Fc portion of human ***IgG*** . Identification of peptides recovered from the tryptic map confirmed 98.8% of the expected structure of ***CD4*** - ***IgG*** . The detection of glucosamine in peptides containing Asn257 and the retention time shift of this tryptic peptide after deglycosylation confirmed the presence of Asn-linked oligosaccharides at this position. Four pairs of intrachain and two interchain disulfide bonds were also established.

L19 ANSWER 24 OF 34 MEDLINE DUPLICATE 7
AN 90321469 MEDLINE
TI Expression and characterization of human ***CD4*** : ***immunoglobulin*** ***fusion*** ***proteins*** .
AU Zettlmeissl G; Gregersen J P; Duport J M; Mehdi S; Reiner G; Seed B
CS Research Laboratories of Behringwerke AG, Marburg, West Germany.
SO DNA AND CELL BIOLOGY, (1990 Jun) 9 (5) 347-53.
Journal code: AF9. ISSN: 1044-5498.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 9011
AB Different ***chimeric*** antibody-like molecules consisting of the four human ***CD4*** extracellular domains (amino acids 1-369) fused to different parts of human ***IgG1*** and IgM heavy-chain constant regions have been created and expressed in mammalian cells. For both ***IgG1*** and IgM ***fusion*** ***proteins*** , the best expression in COS cells was observed for molecules lacking the CH1 domain of the heavy-chain constant region. The ***chimeric*** molecules are potent inhibitors of human immunodeficiency virus (HIV) infection and HIV-mediated cytotoxicity. A ***CD4*** : ***IgG1*** hinge ***fusion*** ***protein*** , which was analyzed in more detail, binds efficiently to HIV gp160 and human Fc receptors and shows complement-assisted inhibition of viral propagation in culture. Half-life studies after intravenous application of the latter human ***fusion*** ***protein*** into mice and monkeys showed significant prolongation of serum survival compared to soluble ***CD4*** . An IgG2b murine homolog of the human ***CD4*** : ***IgG1*** hinge ***fusion*** ***protein*** was prepared and evaluated in mice, where it was found to be nontoxic and to have no detectable effect on the humoral response to soluble antigen.

L19 ANSWER 25 OF 34 MEDLINE
AN 90324622 MEDLINE
TI Determination of mixed chimerism by a simple flow cytometry method.
AU Leenarets P L; Vandeputte M; Waer M
CS Division of Nephrology, University of Leuven, Belgium..
SO JOURNAL OF IMMUNOLOGICAL METHODS, (1990 Jul 3) 130 (2) 163-9.
Journal code: IFE. ISSN: 0022-1759.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 9011
AB A simple, sensitive and accurate method was developed to determine the level of lymphoid ***chimerism*** in bone marrow-transplanted rodents. The method is based on flow cytometry using polyclonal alloantisera and labeled second step anti- ***IgG*** antibodies. Using mixtures of spleen cells from different mouse strains, it was demonstrated that low levels of ***chimeric*** cells (less than 1%) could easily be detected. Moreover, using two-color fluorescence analysis, the level of ***chimerism*** could also be determined in subpopulations of lymphoid cells, e.g., ***CD4*** or CD8 cells and was found to be identical to the results obtained in unseparated lymphoid populations. The method was compared to the complement dependent cytotoxicity assay (CDCA) and to the flow cytometric determination of ***chimerism*** using labeled monoclonal antibodies against specific MHC antigens. CDCA was found to be more labor intensive and could only estimate the composition of the cell mixtures without detecting low levels of ***chimerism*** (less than 5%). The results of flow cytometry, using directly labeled monoclonal

antibodies or polyclonal antibodies with second step reagents, were identical. It is concluded that, due to its simplicity and high sensitivity, the method described permits reliable determination of the level of mixed ***chimerism*** in rodents and is an excellent alternative when no anti-MHC mAbs are available.

L19 ANSWER 26 OF 34 MEDLINE
AN 91085548 MEDLINE
TI CD4-affinity purification of recombinant and native HIV gp120 and comparison of the affinity constants for the receptor.
AU Moritz D; Dirckx L; Mous J; Schneider J
CS Central Research Units, F. Hoffman-La Roche Ltd., Basel, Switzerland.
SO FEBS LETTERS, (1990 Nov 26) 275 (1-2) 146-50.
Journal code: EUH. ISSN: 0014-5793.
CY Netherlands
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 9104
AB Soluble ***CD4*** - ***immunoglobulin*** ***chimeric*** proteins were covalently attached to CNBr-activated Sepharose. This affinity matrix was used to establish a powerful new method to isolate different species of the HIV external glycoprotein gp120 from cell-free culture supernatants. Recombinant gp120 was expressed in Baculovirus-infected insect cells and isolated from cell-free culture supernatants. The recombinant protein has an apparent molecular mass of 130 kDa. These two gp120 species were shown to be of identical molecular size after complete deglycosylation achieved by endoglycosidase treatment, and they bound to ***CD4*** -H gamma I with the same binding constant, that was reported for native forms of gp120 and ***CD4*** . Thus the different glycosylation of gp120 does not influence its affinity to ***CD4*** and the gp120- ***CD4*** complex can be reversibly dissociated.

L19 ANSWER 27 OF 34 MEDLINE DUPLICATE 8
AN 90226048 MEDLINE
TI A CD 4: immunoglobulin fusion protein with antiviral effects against HIV.
AU Gregersen J P; Mehdi S; Gelderblom H; Zettlmeissl G
CS Research Laboratories, Behringwerke AG, Marburg, Federal Republic of Germany.
SO ARCHIVES OF VIROLOGY, (1990) 111 (1-2) 29-43.
Journal code: 8L7. ISSN: 0304-8608.
CY Austria
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 9007
AB Antibody-like molecules consisting of the human CD 4 extracellular domain fused to human IgG1 heavy chain constant regions were genetically constructed and expressed in a BHK cell stable transfectant. Purified chimeric antibodies bound to HIV particles as it was shown by immuno electron microscopy, inhibited fusions of HIV-1-infected cells with uninfected cells, neutralized HIV-1, and were able to inhibit the spread of a cellular HIV-1 infection in CD 4+ cells. Plaque reduction assays with CD 4(+)-transfected Hela-cells showed a comparable inhibition of HIV-1 and HIV-2. Inhibitory functions were enhanced in the presence of complement. HIV-1- and HIV-2-infected CD 4+ cells were efficiently lysed by a slow, complement-dependent mechanism, whereas uninfected CD 4+ cells and HLA-DR+ cells were not affected.

L19 ANSWER 28 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1990:156570 HCAPLUS
DN 112:156570
TI Recombinant proteins containing human CD4 sequences linked to immunoglobulin constant regions and their manufacture
IN Mizukami, Tamio; et al.
PA United States Dept. of Health and Human Services, USA
SO U. S. Pat. Appl., 40 pp. Avail. NTIS Order No. PAT-APPL-7-344 304.
CODEN: XAXXAV
PI US 344304 A0 890815
AI US 89-344304 890427
DT Patent
LA English
AB ***Hybrid*** proteins contg. human ***CD4*** sequences linked to human Ig const. region sequences are manufd. to inhibit human immunodeficiency virus (HIV) infection. Plasmid pCD4ITM20G, expressing ***hybrid*** protein ***CD4*** (178)CH which comprised the amino-terminal 2 Ig-like domains (1-178) of ***CD4*** and 3 const. domains of the human ***IgG1*** heavy chain, and plasmid pCD4ITM40G, expressing ***hybrid*** protein ***CD4*** (181)CL [which comprised the amino-terminal 181 amino acids of ***CD4*** , leucine (artificially created by introduction of a HindIII restriction site), Gln-Met-Lys (of the joining region of human Ig .kappa. light chain, and the whole const. region of the human Ig .kappa. light chain], were constructed and cotransfected into CV-1 cells. A heterotetrameric protein analogous to natural Ig was produced which was made of 2 subunits of ***CD4*** (178)CH and 2 of ***CD4*** (181)CL and thus contained 4 HIV gp120 binding sites. Monoclonal antibody OKT4A, antihuman ***IgG*** (Fc) antibody, protein A-agarose, and antihuman Ig .kappa. monoclonal antibody immunopptd. the ***hybrid*** .

L19 ANSWER 29 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1990:401550 HCAPLUS
DN 113:1550
TI Cloned genes encoding Ig-CD4 fusion proteins and the use thereof
IN Brian, Seed
PA General Hospital Corp., USA
SO Eur. Pat. Appl., 68 pp.
CODEN: EPXXDW
PI EP 325262 A2 890726
DS R: AT, BE, CH, DE, ES, FR, GB, GR, IT, LI, LU, NL, SE
AI EP 89-100913 890120
PRAI US 88-147351 880122
DT Patent
LA English
AB Recombinant ***CD4*** -Ig ***fusion*** ***proteins*** which can be used to detect human immunodeficiency virus (HIV) or simian immunmodeficiency virus (SIV) are prepd. The ***fusion*** ***protein*** comprises an Ig heavy or light chain, the variable region of which has been replaced by ***CD4*** or a HIV gp120env-binding fragment thereof. Plasmid pCD4E.gamma.1, contg. a ***chimeric*** gene for the extracellular domain of ***CD4*** fused to the ***IgGl*** heavy chain upstream of the hinge region, was constructed. BHK cells were transfected with this plasmid, and the ***fusion*** ***protein*** was purified from a culture of these tranfectants. HIV-infected T4-lymphocytes were selectively killed upon incubation with the proteins in the presence or absence of complement.

L19 ANSWER 30 OF 34 MEDLINE DUPLICATE 9
AN 90078997 MEDLINE
TI A chimeric mouse-human antibody that retains specificity for HIV gp120 and mediates the lysis of HIV-infected cells.
AU Liou R S; Rosen E M; Fung M S; Sun W N; Sun C; Gordon W; Chang N T; Chang T W
CS Tanox Biosystems, Inc., Houston, TX 77025.
SO JOURNAL OF IMMUNOLOGY, (1989 Dec 15) 143 (12) 3967-75.
Journal code: IFB. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 9003
AB Murine mAb BAT123, which was made against the envelope glycoprotein gp120 of HTLV-IIIB strain of HIV type 1 (HIV-1), is capable of neutralizing HTLV-IIIB in vitro. It also inhibits the fusion between uninfected ***CD4*** + cells and HIV-1-infected cells to form syncytia. As a step to explore the potential utility of the anti-HIV antibody in vivo, we have constructed a mouse-human ***chimeric*** antibody by rDNA techniques. The ***chimeric*** antibody, which bears the variable domains of mouse antibody BAT123 and constant domains Cr1 and C kappa of human Ig retains the Ag specificity of BAT123 as determined by its reactivity with HIV-1-infected H9 cells, gp120 in Western blot analysis, and the oligopeptide recognized by BAT123. The antiviral activities of the ***chimeric*** antibody in neutralizing HIV-1 infection as well as inhibiting the syncytia formation are also found identical to those of the parent murine antibody. Moreover, in the presence of human blood mononuclear cells, the ***chimeric*** antibody but not BAT123 (mouse ***IgG1***) induces antibody-dependent cellular cytotoxicity. The findings point to the potential usefulness of the ***chimeric*** antibody in treating patients infected with HIV-1.

L19 ANSWER 31 OF 34 HCAPLUS COPYRIGHT 1997 ACS
AN 1989:405563 HCAPLUS
DN 111:5563
TI Highly efficient neutralization of HIV with recombinant CD4-immunoglobulin molecules
AU Traunecker, Andre; Schneider, Josef; Kiefer, Hansruedi; Karjalainen, Klaus
CS Basel Inst. Immunol., Basel, 4058, Switz.
SO Nature (London) (1989), 339(6219), 68-70
CODEN: NATUAS; ISSN: 0028-0836
DT Journal
LA English
AB Mols. were generated which combine the specificity of ***CD4*** and the effector functions of different Ig subclasses. Replacing the VH and CH1 domains of either mouse .gamma.2a or .mu. heavy chains with the first two N-terminal domains of ***CD4*** results in mols. that are secreted in the absence of any Ig light chains. The pentameric ***CD4*** -IgM ***chimera*** is at least 1,000-fold more active than its dimeric ***CD4*** - ***IgG*** counterpart in syncytium inhibition assays and effector functions, such as the binding of Fc receptors and the first component of the complement cascade (C1q), are retained. Deletion of the CH1 domain may allow the assocn. and secretion of heavy chains in the absence of light chains. The basic design of these constructs may be generally and usefully applied.

L19 ANSWER 32 OF 34 MEDLINE
AN 88170798 MEDLINE
TI CD4+ T cell lines with selective patterns of autoreactivity as well

as CD4- CD8- T helper cell lines augment the production of idiotypes shared by pathogenic anti-DNA autoantibodies in the NZB x SWR model of lupus nephritis.
AU Sainis K; Datta S K
CS Department of Medicine, Tupper Research Institute, Boston, MA 02111.
NC CA 31789 (NCI)
SO JOURNAL OF IMMUNOLOGY, (1988 Apr 1) 140 (7) 2215-24.
Journal code: IFB. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 8807
AB The (NZB x SWR)F1 ***hybrid*** mice (SNF1) uniformly develop lethal glomerulonephritis in marked contrast to their parents and produce nephritogenic autoantibodies that consist of highly cationic, ***IgG*** anti-DNA antibodies that share distinct cross-reactive idiotypes called IdLNF1 (idiotypes-lupus nephritis-SNF1). Herein we found that spleen cells of SNF1 mice at the late prenephritic stage, contained ***CD4*** +/CD8- and ***CD4*** -/CD8- Th that not only induced their B cells in vitro to produce highly cationic ***IgG*** autoantibodies to DNA but IdLNF1-positive ***IgG*** antibodies as well. The double-negative Th were unexpected in the SNF1 mice because they lack the lpr (lymphoproliferation) gene. We also derived IL-2-dependent ***CD4*** +/CD8- as well as ***CD4*** -/CD8- T cell lines from nephritic SNF1 mice, that could simultaneously induce IdLNF1-positive and cationic anti-DNA antibodies of ***IgG*** class. The ***CD4*** + T cell lines consisted of "autoreactive" T cells, but not all of the lines were equal in autoantibody-inducing capability. Remarkably, the T cell lines that preferentially responded to F1- ***hybrid*** -MHC determinants, had a significantly greater ability to augment the production of pathogenic autoantibodies. The SNF1-Th could also augment autoantibody production by the NZB or SWR parent's B cells; however, IdLNF1-positive and cationic anti-DNA autoantibodies of ***IgG*** class were not induced, suggesting that the SNF1 mice possess a select population of inducible (susceptible) B cells that are committed to produce nephritogenic autoantibodies and the parental strains are deficient in such B cells. Thus, production of nephritogenic autoantibodies with IdLNF1 markers in the SNF1 mice could result from an interaction between a select population of B cells and ***CD4*** + Th that preferentially recognize unique F1- ***hybrid*** -MHC determinants, as well as double-negative auxiliary Th.

L19 ANSWER 33 OF 34 MEDLINE DUPLICATE 10
AN 87260910 MEDLINE
TI Expression of members of immunoglobulin gene family in somatic cell hybrids between human B and T cells.
AU Kozbor D; Burioni R; Ar-Rushdi A; Zmijewski C; Croce C M
NC CA 39860 (NCI)
SO PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES
OF AMERICA, (1987 Jul) 84 (14) 4969-73.
Journal code: PV3. ISSN: 0027-8424.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals; Cancer Journals
EM 8710
AB Somatic cell hybrids were obtained between human T and B cells and tested for the expression of differentiated traits of both cell lineages. The T-cell parent SUP-T1 is CD3-, ***CD4*** +, CD1+, CD8+, is weakly positive for HLA class I determinants, and has an inversion of chromosome 14 due to a site-specific recombination event between an ***immunoglobulin*** heavy-chain variable gene and the joining segment of the T-cell receptor alpha chain. The B-cell parent, the 6-thioguanine- and ouabain-resistant mutant GM1500, is a lymphoblastoid cell line that secretes ***IgG2*** , kappa chains, and expresses B1, B532, and HLA class I and II antigens. All hybrids expressed characteristics of B cells (Ig+, B1+, B532+, EBNA+, HLA antigens), whereas only ***CD4*** among the T-cell markers was expressed. The level of T-cell receptor beta-chain transcript was greatly reduced and no RNA of the ***chimeric*** T-cell receptor alpha-chain joining segment-***immunoglobulin*** heavy-chain variable region was detected. Southern blot analysis indicated that absence of T-cell differentiation markers in the hybrids was not due to chromosomal loss. Rather, some B-cell-specific factor present in the hybrids may account for the suppression.

L19 ANSWER 34 OF 34 MEDLINE DUPLICATE 11
AN 87281662 MEDLINE
TI Bi-specific monoclonal antibodies: selective binding and complement fixation to cells that express two different surface antigens.
AU Wong J T; Colvin R B
NC R44-CA39965 (NCI)
T32-CA09216 (NCI)
SO JOURNAL OF IMMUNOLOGY, (1987 Aug 15) 139 (4) 1369-74.
Journal code: IFB. ISSN: 0022-1767.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Abridged Index Medicus Journals; Priority Journals; Cancer Journals
EM 8711
AB A new dimension of immunotherapeutic selectivity might be achieved if antibodies could distinguish cells that co-express two different surface antigens. Bi-specific monoclonal antibodies (BSMAB) with two different antigen combining sites that share a common Fc region theoretically might have such a potential. Two such BSMAB were produced by ***hybrid*** -hybridoma clones prepared by fusion of pre-existing hybridomas and were purified by isoelectric focusing. CD3,4 (IgG2a, IgG2b) recognizes the T cell surface antigens CD3 and ***CD4*** , and CD3,8 (IgG2a, IgG2a) recognizes CD3 and CD8. These BSMAB promote complement-mediated lysis of target cells that bear both surface antigens 25 to 3125 times more efficiently than those that express only one of the antigens. This selectivity results from the increased avidity of these antibodies for cells with both antigens, as reflected by the increased surface ***immunoglobulin*** concentration detected by flow cytometry. It was also demonstrated that there exists a threshold surface ***immunoglobulin*** density necessary for antibody-dependent complement-mediated cytotoxicity microtiter assays for the various ***IgG*** antibodies tested in both bivalent and monovalent binding. These results support the associative model of ***IgG*** -mediated complement fixation.

=> log y

COST IN U.S. DOLLARS	ENTRY	SINCE FILE SESSION	TOTAL
FULL ESTIMATED COST		29.73	29.88

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	ENTRY	SINCE FILE SESSION	TOTAL
CA SUBSCRIBER PRICE		-5.31	-5.31

STN INTERNATIONAL LOGOFF AT 13:19:35 ON 04 AUG 1997